

Letters to the Editor

In Reply to Hertwich & Pease, Int. J. LCA 3 (4) 180 – 181, "ISO 14042 Restricts Use and Development of Impact Assessment"

Manfred Marzmann, Sven Olaf Ryding, Helias Udo de Haes, James Fava, Willie Owens, Kevin Brady, Konrad Saur, Rita Schenck

Corresponding author: Dr. Manfred Marzmann, Bayer AG, KS-QUS, Product Stewardship, D-51368 Leverkusen, Germany; e-mail: MANFRED.MARZMANN.MM@bayer-ag.de

In more than 5 years of hard work, the international scientific community under the umbrella of ISO represented by senior experts from all over the world, from academia, industry, government consultancy, and public advocacy, have developed a series of Standards for LCA, the 14040 series. Amongst those, the Life Cycle Impact Assessment Standard ISO 14042 which is now available as DIS (Draft International Standard).

In a probably more than 250-man-years work, the international experts, delegated from their individual countries, have formed a solid and sound consensus on the standardisation of Life Cycle Impact Assessment within the valuable architecture of the complete 14040 series.

1 ISO 14042 Version

HERTWICH & PEASE criticise a version of this work (CD 14042.3), in: The International Journal of LCA, Volume 3 (4), pages 180-181. Since then, the document has gone through several revisions, and some of their comments have been addressed in the interim; thus we reply to their concerns as long as they remain in the document.

2 Constraints and Limitations

HERTWICH & PEASE express the concern that the 14042 document imposes extreme constraints and limitations on LCA and LCIA, especially for the case of comparative assertions. They characterise the language used in the committee draft as being natural science biased and accuse the committee of ignoring insights from academic disciplines that address value questions. In fact, much of the effort of this document has been to separate natural science-based analysis from the use of social-science based value judgement. The members of the subcommittee are well familiar with the advances in social science in developing valuation methods, and recognise the need for such techniques in decision making and communication. However, we are also very much aware that the application of these techniques by different groups can yield dissimilar results, due to differences in priorities, opinions and social values. When comparing the environmental performance of two products, applying the value system of one group to the decision making of another group (as for example, in internationally traded goods) is inappropriate and discredits the outcome of an LCA. This problem was recognised early in the development of the ISO 14040 series standards. ISO 14040 first developed special requirements for comparative assertions in order to prevent misuse of LCA in the marketplace. ISO 14041 followed and thus ISO 14042 is not unique.

3 Public Right to Know

The committee had to find a well-balanced approach to take responsibility for the protection of different goods. On the one hand, as HERTWICH & PEASE call for, there is a right for the public to access information. But on the other hand there is also an obligation to protect the legal rights of third parties who may without good reason be impaired by the outcome of an LCA study.

4 Judgements and Value Choices

HERTWICH & PEASE argue that the 14042 standard would hide judgements

and deny access to value choices, etc. The opposite is true. The present version of the document addresses the reporting and transparency issue in detail. In the same way, the Life Cycle Impact Assessment draft standard requires a very high quality of analysis for studies which are used to support comparative assertions disclosed to the public. Also, within the architecture of the ISO 14040 series of standard, the *Interpretation phase* plays a very important role.

HERTWICH & PEASE argue that the use of expert judgements and value-based procedures, to derive conclusions and provide recommendations, are inevitable. They are right! But within the ISO 14040 series of standard, the international community differentiated between the more science-based elements of LCA and the more normative and interpretive elements. The latter and the deduction of conclusions and recommendations are addressed in the 14043 standard Life Cycle *Interpretation* and not within the Impact Assessment. We therefore highly recommend all users of the Standard to view the whole architecture of LCA.

5 New Developments in LCIA

Another main argument of HERTWICH & PEASE is that the 14042 standard prevents new developments within Life Cycle Impact Assessment. We believe that the opposite is true. The standard will encourage and stimulate the development of more sophisticated and reliable models. For example, the standard identifies criteria which can be used to help develop impact categories, category indicators, and models. We also believe that it is beneficial for LCIA in general that models and tools which incorporate hidden value choices no longer be used; and also that the technical assumptions underlying the models should be made transparent. The proposed standard does not impose individual models or approaches. Within the requirements and guidance provided, the user of the standard has a large amount of flexibility and freedom.

6 Conclusion

Life Cycle Impact Assessment describes indicators and does not predict actual impacts. The value of an LCA is its comprehensive review of all stages of a product's life cycle and its synoptic view of all relevant environmental issues. The current version of the 14042 draft describes the uniqueness of Life Cycle Impact Assessment approach which is distinct from other assessment techniques. The wording was designed to help users of the standard understand how and why LCIA is distinct from other assessment methods.

In closing, we would like to highlight our opinion that the present document on the level of a DIS is sound, stable and practical within the ISO 14040 series of standards. We do not agree with HERTWICH & PEASE that the present document prevents the use of LCIA. It makes a choice regarding the exclusion of weighting across categories in order to prevent misuse in deriving inappropriate claims. And for characterisation it has achieved a well founded synthesis. In addition, we strongly believe that this standard will stimulate the international scientific discussion of LCA and will substantially contribute to enhanced and more valuable applications of LCA in the future.